APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/491,991	01/26/2000	Dean Cheng	081862.P167	9322

			EXAMINER
7590	11/17/2004		TODD, GREGORY G

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ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _09 August 2004_.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-68_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-68_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892) θ

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This is a fourth office action in response to applicant's amendment filed, 09

August 2004, of application filed, with the above serial number, on 26 January 2000 in

which claims 1, 5-8, 10, 12-16, 18, 22-25, 27, 29-33, 35, 39-40, 44, and 46-50 have

been amended and claims 52-68 have been added. Claims 1-68 are therefore pending

in the application.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

Amended Claims 5, 13, 22, 30, 39, 47, 56, 64 recite the limitation "the

hierarchical level" in line 2. There is insufficient antecedent basis for this limitation in

the claim, since "one of a single peer group and a hierarchical level" does not

necessarily give antecedent basis for the hierarchical level when being of a single peer

group in the network.

Amended Claims 6, 23, 40, 57 recite the limitation "the hierarchical network" in

line 2. There is insufficient antecedent basis for this limitation in the claim, since "one of

a single peer group and a hierarchical network" does not necessarily give antecedent

basis for the hierarchical network when being of a single peer group in the network.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-7, 10-15, 18-24, 27-32, 35-41, 44-49, 52-58, and 61-66 are rejected

under 35 U.S.C. 103(a) as being unpatentable over Fukuta et al (hereinafter "Fukuta",

5,090,011) in view of Proctor, Jr. et al (hereinafter "Proctor", 6,563,809).

As per Claims 1, 18, and 52, Fukuta discloses a method, apparatus and a

computer program product, wherein Fukuta discloses:

determining a congestion status associated with a node in the network (at least

col. 4, lines 55-62; col. 7, lines 39-47); and

broadcasting the congestion status to at least one other node in the network (at

least Fig. 1, 13).

Fukuta fails to explicitly disclose the congestion status notice being broadcast to

and associated with a node in one of a single peer group and a hierarchical level.

However, the use and advantages for broadcasting such information is well known to

one skilled in the art at the time the invention was made as evidenced by the teachings

of Proctor. Proctor teaches broadcasting a congestion indicator signal, including a flag

indicator, to identify a base station operating in a congested state and states of

neighboring base stations (at least col. 2 line 60 - col. 3 line 4; col. 3 line 66 - col. 4 line

21; also, col. 4, lines 32-65). Therefore, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to incorporate the use of Proctor's

hierarchical broadcasting of such congestion notifications into Fukuta's system as this

would enhance Fukata's system so that the congestion notice is sent not only to the

source node but, for example, to mobile stations at a lower level and also neighboring

base stations within the same peer level in order for affected nodes to be informed and

aware of such network properties affecting communication.

As per Claims 2, 19, 36, 53.

measuring a node condition (threshold value) at the node, the node condition

corresponding to the congestion status (at least col. 12, lines 1-15).

As per Claims 3, 20, 37, 54.

setting a transit flag, the transit flag being accessible to the at least one other

node (at least col. 15, lines 19-26).

As per Claims 4, 12, 21, 29, 38, 46, 55, 63.

the node is one of a transit node and a terminating node (at least Fig. 13).

As per Claims 5, 13, 22, 30, 39, 47, 56, 64.

Fukuta fails to explicitly disclose the node is a logical node in the hierarchical

level, the logical node corresponding to a peer group at a next lower level. However, the

use and advantages for broadcasting such information is well known to one skilled in

the art at the time the invention was made as evidenced by the teachings of Proctor.

Proctor teaches broadcasting a congestion indicator signal, including a flag indicator, to

identify a base station operating in a congested state and states of neighboring base

stations (at least col. 2 line 60 - col. 3 line 4; col. 3 line 66 - col. 4 line 21; also, col. 4,

lines 32-65). Therefore, it would have been obvious to one of ordinary skill in the art at

the time the invention was made to incorporate the use of Proctor's hierarchical

broadcasting of such congestion notifications into Fukuta's system as this would enhance Fukata's system so that the congestion notice is sent not only to the source node but, for example, to mobile stations at a lower level and also neighboring base stations within the same peer level in order for affected nodes to be informed and aware of such network properties affecting communication.

As per Claims 6, 23, 40, 57.

Fukuta fails to explicitly disclose the at least one other node is one other logical node in the hierarchical level, the one other logical node corresponding to one other peer group at a next lower level. However, the use and advantages for broadcasting such information is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Proctor. Proctor teaches broadcasting a congestion indicator signal, including a flag indicator, to identify a base station operating in a congested state and states of neighboring base stations (at least col. 2 line 60 - col. 3 line 4; col. 3 line 66 - col. 4 line 21; also, col. 4, lines 32-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Proctor's hierarchical broadcasting of such congestion notifications into Fukuta's system as this would enhance Fukata's system so that the congestion notice is sent not only to the source node but, for example, to mobile stations at a lower level and also neighboring base stations within the same peer level in order for affected nodes to be informed and aware of such network properties affecting communication.

As per Claims 7, 15, 24, 32, 41, 49, 58, 66.

the network is an asynchronous mode transfer (ATM) network (at least col. 1, lines 11-20).

As per Claims 10, 27, and 61, Fukuta discloses a method, apparatus, and a computer program product to manage congestion in a network, the method comprising:

receiving a congestion status (congestion notice) associated with a node in network, the congestion status corresponding to a measured node condition at the node and being broadcast by the node; and

routing a call to the node based on the received congestion status (polling) (at least Fig. 26; col. 16, lines 21-40).

Fukuta fails to explicitly disclose the congestion status notice being broadcast to and associated with a node in one of a single peer group and a hierarchical level. However, the use and advantages for broadcasting such information is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Proctor. Proctor teaches broadcasting a congestion indicator signal, including a flag indicator, to identify a base station operating in a congested state and states of neighboring base stations (at least col. 2 line 60 - col. 3 line 4; col. 3 line 66 - col. 4 line 21; also, col. 4, lines 32-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Proctor's hierarchical broadcasting of such congestion notifications into Fukuta's system as this would enhance Fukata's system so that the congestion notice is sent not only to the source node but, for example, to mobile stations at a lower level and also neighboring base stations within the same peer level in order for affected nodes to be informed and aware of such network properties affecting communication.

As per Claims 11, 28, 45, 62.

accessing a transit flag set by the node, the transit flag corresponding to the

congestion status (at least col. 15, lines 54-64)..

As per Claims 14, 31, 48, 65.

routing the call to the node if the node is a terminating node; and

routing the call to the node if the node is a transit node and the congestion status

indicates that the node is not congested (polling) (at least Fig. 13, 26; col. 16, lines 21-

40).

As per Claim 35, Fukuta discloses a system interfacing to a network wherein

Fukuta discloses:

a processor coupled to the network (at least col. 15, lines 19-26); and

a memory coupled to the processor (at least col. 15, lines 19-26), the memory

managing congestion in the network, when executed causing the processor to:

determine a congestion status associated with a node the network (at

least col. 4, lines 55-62; col. 7, lines 39-47); and

broadcasting the congestion status to at least one other node in the the

network (at least Fig. 1, 13).

Fukuta fails to explicitly disclose the congestion status notice being broadcast to

and associated with a node in one of a single peer group and a hierarchical level.

However, the use and advantages for broadcasting such information is well known to

one skilled in the art at the time the invention was made as evidenced by the teachings

of Proctor. Proctor teaches broadcasting a congestion indicator signal, including a flag

indicator, to identify a base station operating in a congested state and states of

neighboring base stations (at least col. 2 line 60 - col. 3 line 4; col. 3 line 66 - col. 4 line 21; also, col. 4, lines 32-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Proctor's hierarchical broadcasting of such congestion notifications into Fukuta's system as this would enhance Fukata's system so that the congestion notice is sent not only to the source node but, for example, to mobile stations at a lower level and also neighboring base stations within the same peer level in order for affected nodes to be informed and aware of such network properties affecting communication.

As per Claim 44, Fukuta discloses a system interfacing to a network wherein Fukuta discloses:

a processor coupled to the network (at least col. 15, lines 19-26); and

a memory coupled to the processor (at least col. 15, lines 19-26), the memory managing congestion in the network, when executed causing the processor to:

receive a congestion status (congestion notice) associated with a node in the network, the congestion status corresponding to a measured node condition at the node and being broadcast by the node; and

route a call to the node based on the received congestion status (polling) (at least Fig. 26; col. 16, lines 21-40).

Fukuta fails to explicitly disclose the congestion status notice being broadcast to and associated with a node in one of a single peer group and a hierarchical level. However, the use and advantages for broadcasting such information is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Proctor. Proctor teaches broadcasting a congestion indicator signal, including a flag

indicator, to identify a base station operating in a congested state and states of

neighboring base stations (at least col. 2 line 60 - col. 3 line 4; col. 3 line 66 - col. 4 line

21; also, col. 4, lines 32-65). Therefore, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to incorporate the use of Proctor's

hierarchical broadcasting of such congestion notifications into Fukuta's system as this

would enhance Fukata's system so that the congestion notice is sent not only to the

source node but, for example, to mobile stations at a lower level and also neighboring

base stations within the same peer level in order for affected nodes to be informed and

aware of such network properties affecting communication.

5.   Claims 8-9, 16-17, 25-26, 33-34, 42-43, 50-51, 59-60, and 67-68 are rejected

under 35 U.S.C. 103(a) as being unpatentable over Fukuta in view of Proctor and

further in view of Fedyk et al (hereinafter "Fedyk", 6,560,654).

       As per Claims 8, 16, 25, 33, 42, 50, 59, 67.

       Fukuta and Proctor fail to disclose the node being one of a private network-to-

network interface (PNNI) node. However, the use and advantages for using such an

interface is well known to one skilled in the art at the time the invention was made as

evidenced by the teachings of Fedyk. Fedyk discloses using a PNNI interface within his

network (at least col. 3, lines 30-45). Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to incorporate and implement

the use of a PNNI node in a network being able to monitor and advertise congestion

statuses with other nodes on the network since it would allow for the PNNI node to

operate over existing network implementations and therefore enhance the expendability and compatibility of Fukuta and Proctor's network.

As per Claims 9, 17, 26, 34, 43, 51, 60, 68.

Fukuta and Proctor fail to disclose the transit flag being one of a PNNI topology state parameter. However, the use and advantages for using such an interface is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Fedyk. Fedyk discloses using PNNI topology state packets within his network (at least col. 3, lines 30-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate and implement the use of a PNNI topology state in an ATM network enabling monitoring and advertising congestion statuses with other nodes on the network since it would allow for the PNNI node to operate over existing network implementations and therefore enhance the expendability and compatibility of Fukuta and Proctor's network by having the PNNI parameters encapsulated within the packets used on the ATM network.

Response to Arguments

6.   Applicant's arguments with respect to claims 1-51 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in

the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Fedyk and Fukuta are in the same field and ultimately have the same goal to notify nodes of congestion and route traffic accordingly.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Previously cited Cherukuri et al, Gao et al, Yamato et al, Cha et al, Fukuta et al, Pajuvirta et al, Mairs et al, Daines et al, Song, Murase, Nishihara, Ginossar, Kirschenbaum, and Milles are cited for disclosing pertinent information related to the claimed invention. Applicants are requested to consider the prior art reference for relevant teachings when responding to this office action.

8.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory G Todd whose telephone number is (571)272-4011. The examiner can normally be reached on Monday - Friday 9:00am-6:00pm w/ first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
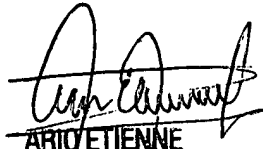
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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Gregory Todd

Patent Examiner

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